

Table 5.9

| CONSTRAINED TRANSIT CORRIDOR PROJECTS | | | | |
|---------------------------------------|---|--|------------------------------------|---------------------|
| County | Corridor | Project Limits | Description | Completion Schedule |
| L o s A n g e l e s | Alvarado | Hill/King to Alvarado/Sunset | Rapid Bus | 2010 |
| | Atlantic | Del Mar to Long Beach Blue Line | Rapid Bus | 2010 |
| | Avalon | Avalon/El Segundo to Vermont Red Line | Rapid Bus | 2010 |
| | Century Blvd | 96th/Vicksburg to Rives/Imperial Hwy | Rapid Bus | 2010 |
| | Crenshaw-Rossmore | Hollywood/Vine to Wilshire | Rapid Bus | 2010 |
| | Crenshaw Corridor | Wilshire/Rossmore to Crenshaw/Green Line | Fixed Guideway/Busway | 2025 |
| | Florence | La Tijera/Manchester to Florence/Garfield | Rapid Bus | 2010 |
| | Garvey | Hope/11th to Santa Anita/Romona | Rapid Bus | 2010 |
| | Hawthorne | Crenshaw/Florence to Hawthorne/Sepulveda | Rapid Bus | 2010 |
| | Hollywood-Fairfax | Fairfax/Washington to Vermont/Fountain | Rapid Bus | 2010 |
| | Hollywood-Pasadena | Hollywood/Highland Red Line to Colorado/Hill | Rapid Bus | 2010 |
| | Long Beach Blvd. | 4th/Hill to Artesia Blue Line Station | Rapid Bus | 2010 |
| | Roscoe | Topanga Cyn/Victory to Universal City Red Line Station | Rapid Bus | 2010 |
| | San Fernando Rd | Union Station to Sylmar Metrolink | Rapid Bus | 2010 |
| | Santa Monica | Union Station to Santa Monica | Rapid Bus | 2010 |
| | Soto | Long Beach/Lynwood to Valley Rd/Soto | Rapid Bus | 2010 |
| | Van Nuys | Foothill to Ventura | Rapid Bus | 2010 |
| | Venice & Pico/East 1st | Santa Monica/Venice to East LA | Rapid Bus | 2010 |
| | Vermont | Vermont/Wilshire Red Line to Green Line | Rapid Bus | 2010 |
| | Vernon-La Cienega | San Vicente/Santa Monica to Florence/Wilcox | Rapid Bus | 2010 |
| | West Third | Century City to Downtown LA | Rapid Bus | 2010 |
| | Western | Western/Hollywood Red Line to Green Line | Rapid Bus | 2010 |
| | Green Line Extension | Mariposa/Nash to Century/Sepulveda (LAX Term.) | Light Rail | 2010 |
| | San Fernando Valley North/South Corridor | possible alignment follows Van Nuys Rapid Bus | Fixed Guideway/Busway | 2025 |
| O r a n g e | Garden Grove Blvd | Valley View/Chapman to Glassell/Chapman | Rapid Bus | 2010 |
| | Katella Ave | Channel/7th to Harbor/Katella | Rapid Bus | 2010 |
| | Bolsa Ave/1st St | Bolsa Chica/Bolsa Ave to 1st/Newport | Rapid Bus | 2010 |
| | Harbor Blvd | 19th to Commonwealth | Rapid Bus | 2010 |
| | Bristol St | Jamboree/Bristol to State College/Birch | Rapid Bus | 2010 |
| | Main St | Culver to Taft | Rapid Bus | 2010 |
| R I V | San Jacinto Commuter Rail | 4th & D St to 7th & State St | Commuter Rail | 2020 |
| | Intercity Rail | Colton (SB Co.) to Palm Springs | Interregional Rail (AMTRAK) | 2015 |

With the Baseline projects, as well as the constrained corridors, the maintenance of the 1997 per capita ridership goal can be achieved. Several strategies will pave the way over the Plan period. Strategies include a significant increase in service availability, the use of articulated buses and shifting some service from the under-performing lines to the heavily traveled corridors. Daily boardings will double with the implementation of Metrolink's Long-Range Capital Plan and there will be expansion of urban rail in Los Angeles County. New rapid bus lines will be implemented on heavily traveled corridors and many bus lines will be added or restructured to feed into the existing and proposed urban and commuter rail system. In 2025, some of the rapid bus lines in Los Angeles County will be upgraded to busway corridors, also known as Bus Rapid Transit.

The financially constrained Rapid Bus corridors in Tables 5.8 and 5.9 are designed to connect major activity centers and create a multi-modal system that serves Southern California residents. Several corridors link current bus routes to existing Metrolink stations and urban rail lines. Rapid Bus service consists of a simple route layout, frequent service, less frequent stops, low-level buses for fast boarding and exiting, color-coded buses and stops as well as signal priority at intersections. Service for these corridors in 2025 will be every 3 to 5 minutes during peak periods and every 10 minutes during off-peak periods and weekends. In addition to the re-routing of bus lines, the deployment of shuttles and circulators would also feed into the current transit network. These circulators can be very effective when deployed in certain niche markets.

Future studies are planned to examine new transit corridors and the feasibility of extending existing ones. The Eastside light rail corridor would be extended to Norwalk and Whittier Boulevard. The Pasadena Blue Line would extend out to the Claremont Metrolink Station, located at Central and Arrow. In addition to these extensions, a study of the Pacific Electric right-of-way, which begins in Downtown Los Angeles and terminates in Santa Ana, would be conducted.

Exhibit 5.6 depicts what the fixed transit corridor network would look like in the SCAG Region in the year 2025.

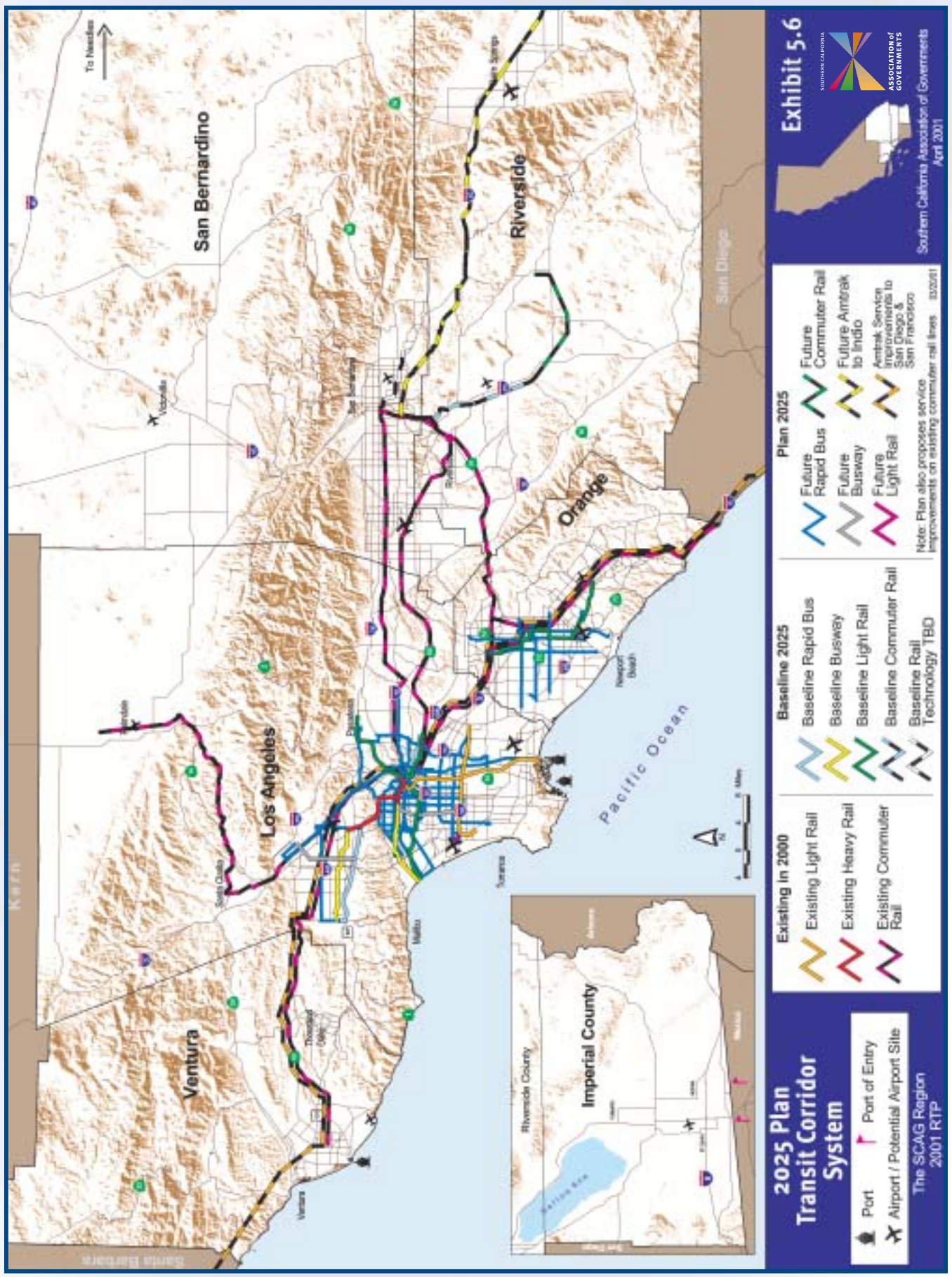
Commuter Rail

SCRRA has developed a \$1.1 billion-dollar long-range capital improvement plan that when fully implemented will effectively double the Metrolink System's passenger carrying capacity. The long-range capital plan includes selective double tracking on critical route segments, switching and signal improvements, communication system improvements, new stations and enhancements to existing stations. Plans also include future service expansion on the Redlands and San Jacinto branch lines. At this time, a specific mode has not been chosen for the Redlands corridor, but these lines will feed into the current commuter rail system.

Shuttles and Circulators

Third tier transit services, including Smart Shuttles, community based transit system and new private services could potentially support an additional 20 percent of transit ridership above those levels currently modeled and validated.

2025 Plan Transit Corridor System



Third tier systems currently operating appear to be carrying a significant volume of passengers. An analysis of third tier community-based transit systems is to be carried out by SCAG by the end of FY 2000/01. This may yield additional information pertaining to the likely effectiveness of such systems.

Technology will improve the performance and reliability of Smart Shuttles and community-based transit services. Enhanced customer awareness will also improve Smart Shuttle effectiveness and encourage more commuters to shift to third tier transit services. However, to increase service levels and institute new services in high growth areas, many of these services will require additional resources. This raises significant policy questions about whether and how such resources can be generated and allocated.

Over the last ten years, public transportation services provided by the private sector have grown significantly. These include a variety of market niche services (e.g., airports, Metrolink, livery, special needs services, urban rail stations) and contract services (e.g., employer shuttles, shopper shuttles, social services transportation and community-based transit). The market for these niche services is estimated to expand at least proportionally to the population and associated demographic changes over the next 25 years.

Transit Centers

Balanced local land-use and transportation policies can reduce auto travel and support more pedestrian, mixed-use and transit-oriented developments throughout the Region. Transit provides an alternative means of personal mobility, increases capacity when needed and contributes to the quality of life in metropolitan communities. Transit facilities, services and centers are best when they are customer-friendly, community-oriented and well designed. A network of transit-based centers and corridors, supported by in-fill development, maximizes the use of existing infrastructure, supports transit ridership, reduces automobile air pollution and preserves natural areas.

To further encourage the use of transit and ridesharing, new transit centers and park-and-ride facilities would be constructed in areas that provide access to the freeway HOV network, transit corridors and Express Bus origins. Existing transit centers may be upgraded for multi-modal uses that support restructured transit services. Possible investments, based on performance over the 2001 RTP period, are estimated to cost \$200 million.



The Program

Transit represents a vital component of our transportation network, regardless of the policy decisions and directions that are adopted. In order to remain so, transit operators must be able to develop and maintain services that attract and retain users.

Transit service development philosophy should focus on services that are:

- ▶ Available for use when the customers want to use them
- ▶ Accessible by customers without major obstacles (physical, institutional or informational)
- ▶ Planned from the customer's point of view

Failure to meet the transit ridership goals, to at least maintain current per capita ridership, would, over the life of the Plan, add to increased congestion and further deterioration of air quality. More importantly, the viability of transit, as more than a social safety net, would be questioned, especially given the massive financial investments the Region has made in transit.

The following actions, when implemented, will provide an attractive alternative to single occupancy vehicle trips and help achieve regional goals by reducing congestion and delays. The Task Force identified actions to enhance transit service in several areas as follows:

Transit Service Management Actions:

- ▶ Transit schedule adherence needs attention. Buses should arrive within 5 minutes of the published time. Where this is not practical, realistic schedules should be published.
- ▶ Bus stops should be physically adequate to accommodate passenger access and egress, as well as minimize auto/bus conflicts (even if this means removal of parking), and should be free of pedestrian impediments.
- ▶ Regional transit vehicles should be equipped with Intelligent Transportation System (ITS) technology where this adds to on-time reliability and/or operating efficiencies.
- ▶ Bus priority service (transitway or rapid bus) should be implemented concurrently with smart street technology.
- ▶ On corridors or arterials that are used by multiple operators, operators should consider coordinated ticketing to enable "open door" policies.
- ▶ Transit corridor services should support the urban rail and commuter rail systems.
- ▶ Local transit services should be restructured or re-deployed to prioritize collector and distributor functions to support transit corridors and rail systems.
- ▶ Fare structures should be coordinated when possible to create a seamless regional transit network.
- ▶ User-side subsidies should be implemented where service-side is too expensive or impractical.

Transit Demand Management Actions:

- ▶ Differentiated transit fare (e.g., one-half fare off-peak) should be considered region-wide.
- ▶ Transfers should be free.
- ▶ Employer-based incentives should be encouraged.
- ▶ Transit should be aggressively marketed where it offers a viable alternative to automobile use.

Growth Management Actions:

- ▶ Transit mitigation actions that are mandatory parts of the planning, permitting and zoning process. Proposed mitigation efforts shall include transit providers.
- ▶ Working with agencies that are able to create transit mitigation policies and enforce them—i.e., the California Environmental Quality Act could be amended to require new development to include transit mitigation that equals or exceeds the area's mode split.
- ▶ Encourage communities with transit supportive densities.

Institutional Actions:

- ▶ Transit providers should support the extension of existing supplemental sales taxes and development of revenue from market-based measures.
- ▶ Regional transit providers and municipal operators should be required to coordinate transit services and fare systems where jurisdictional boundaries are crossed.
- ▶ New or expanded service should be prioritized to support existing infrastructures.
- ▶ New or expanded service should be designed to meet operational objectives.
- ▶ Local transit investments should leverage federal funds to the greatest extent possible.
- ▶ Support a regional transit forum to monitor transit usage and further analyze an approach and implementation schedule to achieve regional goals like maintaining per capita ridership.

MAGLEV SYSTEM

The Intra-Regional High Speed Rail Maglev using magnetic levitation (Maglev) technology would connect major activity and transportation centers in Los Angeles, Orange, Riverside and San Bernardino Counties. The system would be comprised of one line connecting LAX to March Inland Port, and is anticipated to be implemented by private sector in the year 2010. However, the year 2010 conformity findings of the 2001 RTP were based on not taking any VMT and emission reduction benefits from implementation of this Maglev project. The year 2020 conformity finding was benefited from implementation of LAX-March Maglev project (VMT and emission benefits were included in the year 2020 for conformity finding of the 2001 RTP in SCAB). In 2025, the system would be completed with the three remaining lines, Palmdale to LAX, Palmdale to the Los Angeles Union Passenger Terminal (LAUPT) and LAUPT to Orange County and San Bernardino. The Maglev program also envisions longer-term connections to San Diego, a connection between San Bernardino and Palmdale via a high desert alignment and interlining with the proposed California High-Speed Rail System. If the State is successful at adopting a high-speed rail system, SCAG's Regional Council will support the north corridor to Palmdale and the south inland corridor.

On June 30, 2000, SCAG submitted the completed LAX to March Inland Port Maglev Project Description, which demonstrated that an intra-regional Maglev system could generate sufficient ridership and revenue to cover all capital, construction, operational and debt-retirement costs to the Federal Railroad Administration (FRA).

2025 Plan Maglev Projects



When fully deployed, the Intra-Regional Maglev System could create the basis for a 50-year regional surface transportation system that could offer a functional and practical transportation alternative as significant to this Region as the freeway network developed during the last 50 years.

The Maglev Project Description document further demonstrated that the Intra-Regional System could be constructed and deployed through a public-private partnership structure administered through a public agency, a joint powers authority (JPA) or a public non-profit (PNP) format, using a number of innovative and traditional funding mechanisms. Anticipated actions in the short term include support for feasibility studies on the corridors that connect the Los Angeles Union Passenger Terminal (LAUPT) to Orange County and Orange County to the Inland Empire. A separate multi-modal study has been initiated on the I-405 Corridor to examine and evaluate a connection between LAX, the City of Long Beach/Long Beach Airport and a southern Orange County terminus at the John Wayne Airport, the Proposed El Toro Airport or the OCTA Transit Facility in Irvine. The future of the Maglev effort will depend largely on two factors: private sector interest in financing the system and how the system performs based on SCAG's performance criteria.

ACTION—Support additional feasibility and deployment studies in the Region.

ACTION—Work with private consortia to develop a public-private partnership structure.

The Maglev project is a transit strategy that will increase accessibility to the Region's major activity centers and provide congestion relief. Between the 2001 RTP and the 2004 RTP, any progress in the implementation of this project (LAX-March Airport Segment), as well as those activities that under the federal and state laws require programming, will be reflected in the respective Regional Transportation Improvements Programs (RTIPs).

| Milestone | Action(s) | Year(s) |
|-----------|--|---------|
| 1. | SCAG Develops Business/Financial Plan | 2001-02 |
| 2. | SCAG Implements Public/Private Partnership | 2001-02 |
| 3. | Environmental Document(s) | 2001-03 |
| 4. | Preliminary Engineering | 2003-04 |
| 5. | Final Engineering | 2004-05 |
| 6. | Construct Phase 1 Segments (Ontario to Covina) (Covina to Union Station) | 2005-07 |
| 7. | Construct Phase 2 Segments (Ontario to March IP) (Union Station to LAX) | 2007-10 |

GOODS MOVEMENT – PORTS, RAIL AND TRUCKS

The SCAG Region is the nation's most important port region, with three maritime ports serving the Pacific Rim, home to major U.S. trading partners. The amount of cargo brought into the Region by these seaports and by airports is expected to greatly increase over the next 25 years as international trade volumes triple. At the same time, total Goods Movement traffic is expected to grow more than 80 percent. Many of these goods are manufactured in the Region, as Southern California is the nation's second largest metropolitan manufacturing area. In fact, trade, transportation and manufacturing support approximately 45 percent of the Region's employment.

By 2025, airport, highway and rail capacity to handle this increased traffic will be severely strained. Rail use, even with the Alameda Corridor improvements, will be approaching capacity limits. Most of the Region's freeways and local arterials will be subject to severe delays caused, in part, by increased truck traffic—increasing shipment time and costs and reducing the reliability of motor freight. Trucks are expected to carry the majority of goods traveling less than 800 miles. There is almost no capacity to deal with this increase. The Region will be hard pressed to maintain the existing levels of moving goods, let alone handle the expected increases. Without an ability to move goods in 2025, the vitality of the Southern California economy will be impaired. SCAG forecasts that by 2025, some freeways will be severely impacted by trucks. The number of trucks is already as high as 36,000 per day on some freeways and may well exceed 80,000 per day on certain corridors in the year 2025.

Goods Movement Investments

The Goods Movement Advisory Committee (GMAC) and the Truck Lane Task Force addressed this area of the Plan. The GMAC has adopted the following non-prioritized list of projects, focus areas and needed studies:

- ▶ Truck Lanes
- ▶ Regional Railroad Grade Crossing Improvements
- ▶ Alameda Corridor
- ▶ Alameda Corridor East and Orangethorpe Corridor
- ▶ Southwest Passage
- ▶ Subregional Freight Studies
- ▶ Improvements in Freight Movement Productivity (Extended Hours of Delivery)
- ▶ Transportation Funding for Freight Movement
- ▶ Aviation: Air Cargo and Ground Access Issues
- ▶ NAFTA
- ▶ The I-710 Gap Closure
- ▶ 2000 Air Quality Management Plan/Heavy Duty Diesel Emissions and Mitigation
- ▶ Clean Fuel Technologies for Goods Movement
- ▶ Regional/Subregional Equity in Funding/Project Development

2025 Plan Goods Movement Projects



The Goods Movement section of the 2001 RTP primarily addresses recommendations for studies and implementation of projects in the first eight of these areas: truck lanes, railroad grade crossing improvements, the Alameda Corridor, the Alameda Corridor East and Orangethorpe Corridor, the Southwest Passage, subregional freight studies, improved freight productivity and transportation funding for freight movement. The remaining six projects, focus areas and needed studies are also of considerable importance to the Region, but fall under the purview of other SCAG committees and task forces. These are addressed in other sections of this document.

Truck Lanes and Truck Climbing Lanes

Trucks support the Region's manufacturing industry and are essential to the intra-regional distribution of consumer goods. Major freeways that could significantly benefit from separate truck facilities are identified below. Currently, these corridors carry high volumes of truck traffic, which contribute to substantial peak hour delay and unsafe traffic conditions related to the interweaving of trucks and automobiles. The current regional heavy-duty truck volume is estimated to increase by over 60 percent through 2025. In an effort to improve throughput for trucking and to ensure the continued vitality of the Goods Movement sector, SCAG is reviewing design options for truck lanes and truck climbing lanes with Caltrans and Goods Movement stakeholders.

The truck lanes are assumed to be separate lanes constructed along the outside of the freeway with limited direct access to and from arterials. These truck lanes can serve as a system for moving commercial trucks in a more efficient and less congested manner. Truck lanes will be grade separated from existing freeway ramps to minimize conflict between vehicles. Where sufficient right-of-way is not readily available, new mixed-flow or HOV lanes could be placed on aerial structures so that existing lane space could be utilized for additional truck facilities. Tolloed truck lanes are proposed to accommodate two lanes in each direction, which is viewed as the optimal configuration for truck facilities.

Table 5.10

| TRUCK LANE PROJECTS | | | |
|---|-------------------------|-----------------------|---|
| Project | Implementation Schedule | County | Project Development Requirement/Status |
| SR-60 (I-710 to San Bernardino County) | 2010 | Los Angeles | Preliminary Feasibility Study Completed |
| SR-60 (Los Angeles County to Riverside County) | 2010 | San Bernardino | Preliminary Feasibility Study Completed |
| SR-60 (San Bernardino County to I-15) | 2010 | Riverside | Preliminary Feasibility Study Completed |
| I-15 (SR-60 to San Bernardino County) | 2020 | Riverside | Preliminary Feasibility Study to be Started in Calendar Year 2001 |
| I-15 (Riverside County Line to US-395) | 2020 | San Bernardino | Preliminary Feasibility Study to be Started in Calendar Year 2001 |

A total of \$3.64 billion in public funding and \$1.62 billion in private funding is proposed.

Table 5.11

| TRUCK CLIMBING LANE PROJECTS | | | |
|-----------------------------------|-------------------------|-----------------------|--|
| Project | Implementation Schedule | County | Project Development Requirement/Status |
| I-15 (Devore to Summit) | 2010 | San Bernardino | PSR Needed |
| SR-57* (Lambert to Tonner) | 2010 | Orange | PSR Needed |

* The SR-57 truck climbing lane is included in a project to provide auxiliary freeway lanes along SR-57 between SR-22 and the LA County Line, costing \$186 million (not included as part of the truck climbing projects). The truck climbing lane would be in the northbound direction. This project is included in the highway section of the Plan and is shown here for information purposes only.

The estimated total cost of the truck lane projects included in the Plan is \$4.3 billion for the SR-60 truck lanes. Approximately 70 percent or \$3 billion of this cost is assumed to be publicly funded and the remaining \$1.3 billion will be financed privately. Approximately \$700 million in public funding and \$300 million in private funding is allocated for the truck lanes on I-15.

New truck climbing lanes are expected to be of similar design and configuration to the existing truck climbing lane facilities. Truck climbing lanes are additional lanes located on the outside of the freeway in an uphill direction, which permit slower-moving trucks to operate at their own pace without reducing the speed of mixed-flow traffic. This facility category may also include downhill truck descending lanes /escape ramps, although the estimated cost of these lanes is relatively small. In addition to the truck climbing lanes listed on Table 5.11, it should be noted that truck climbing lanes are already programmed in the current RTIP for I-215 in the vicinity of UC Riverside and Box Springs in Riverside County; for I-10 from Ford to Yucaipa Boulevard.; and for I-15 along the Cajon Pass and near Barstow and Baker.

Table 5.12

| TRUCK LANE STUDY PROJECTS | | | |
|--|-------------------------|--------------------|--|
| Study | Implementation Schedule | County | Project Development Requirement/Status |
| I-5 (I-605 to SR-14) | To Be Determined | Los Angeles | Preliminary Feasibility Study Needed |
| I-5 (SR-14 to SR-126) | To Be Determined | Los Angeles | Preliminary Feasibility Study Needed |
| I-710 (SR-60 to Port of Long Beach) | To Be Determined | Los Angeles | Preliminary Feasibility Study Needed |

The truck lane projects identified above will require a preliminary study to determine the willingness and interest of the private sector to participate in funding (through tolls, user fees or other measures) and at what level.

Preliminary estimates are that the I-710 truck lane project would cost \$1.4 billion and the I-5 truck lane project from I-605 to SR-14 would cost \$3.1 billion (the short segment from SR-14 to SR-126 would cost an additional \$113 million).

Another project that could significantly improve truck traffic is the SR-58 mixed-flow truck route project in San Bernardino County. This would extend from the LA County line to I-15 at an estimated cost of \$208.8 million. This project is included in the highway section of the 2001 RTP.

ACTION—Develop an effective cost-sharing method between public and private sectors for the construction and operation of truck facilities. Maintain an open dialogue on an approach to develop financing that is both adequate and equitable between counties.

ACTION—Develop a truck lane major investment study (MIS). The MIS process, and other means, should be used to evaluate the routes included in the RTP and other potential routes as well.

ACTION—Support the development and construction of dedicated truck lane facilities along freight corridors as a system.

ACTION—Develop criteria and standards for interchanges and ramp access from truck lanes to intermodal facilities to help prioritize projects within a constrained financial base.

Railroad Grade Crossings

Regional rail freight movements often conflict with highway commuter and Goods Movement traffic. With the anticipated increase in port traffic and total train movements of all kinds, substantial additional delay for passenger vehicles and trucks can be expected at grade crossings. To avoid these delays, grade separations carrying arterials under or over rail lines carrying substantial amounts of freight from the ports are recommended along critical routes such as the Alameda Corridor East, including the Los Angeles-Orangethorpe-Riverside rail freight corridor (Orange County Gateway) (see Table 5.13). A regional grade crossing improvement program is under development

Table 5.13

| GRADE CROSSING CORRIDOR PROJECTS | | | |
|---|-------------------------|-----------------------|---|
| Project | Implementation Schedule | County | Project Development Requirement/Status |
| Imperial | 2020 | Imperial | Individual Crossings Studied |
| Los Angeles (Including Gateway Cities, North Los Angeles County) | 2025 | Los Angeles | Feasibility Study Completed/ Individual Crossings Studied |
| Orangethorpe | 2010 | Orange | Feasibility Study Completed; Further Study Underway as The ONTRAC or Orange County Gateway Corridor |
| Orange-Olive | 2010 | Orange | Feasibility Study Completed |
| Riverside | 2025 | Riverside | Feasibility Study Completed |
| San Bernardino | 2025 | San Bernardino | Feasibility Study Completed |

A total of \$1.8 billion in public funds and \$318 million in private funds is proposed.

and will identify the critical grade crossing projects, including grade separations and at-grade crossing safety projects for both commuter and freight rail in the Region. As part of the improvement program, a financing program will be prepared.

ACTION—Support the subregions in obtaining funding for grade crossing studies.

ACTION—Construct grade separations where streets and highways cross regional rail lines. Study the funding mechanisms for grade crossing improvement projects to meet the needs of the entire Region.

ACTION—Recognize the need for additional funding for grade crossing improvement projects to relieve truck and other highway congestion because current program funding needs exceed available public and private funding.



Alameda Corridor

The Alameda Corridor is a 20-mile rail freight corridor from the Ports of Long Beach and Los Angeles to Downtown Los Angeles, comprising railroad capacity (track and signaling) improvements and grade separations of the entire rail line. It includes parallel arterial improvements to expedite truck movements. Improvements along the corridor will cost \$1.9 billion to be funded by the Ports of Long Beach and Los Angeles, federal loans as well as Surface Transportation Program (STP) and Congestion Mitigation and Air Quality (CMAQ) funds. The 2001 RTP supports the completion of the corridor program to consolidate rail traffic and improve highway truck access.

ACTION—Alameda Corridor Transportation Authority to complete the Alameda freight movement corridor program.

Alameda Corridor East and other Main Line Railroad Corridors

The Union Pacific (UP) Railroad segment of the Alameda Corridor East (ACE) is a 55-mile rail corridor from East Los Angeles to Colton Crossing in San Bernardino County. The estimated cost for grade crossing improvements and separations for 55 grade crossings within LA County, from Downtown Los Angeles to Pomona, is included in the Baseline. The Governor's Traffic Congestion Relief Program includes additional funding for the Alameda Corridor East in the San Gabriel Valley in Los Angeles County. In addition, TEA-21 funds have been earmarked for this program. A full funding program including local, state, federal and private resources is under development.

A continuation of the UP segment of the ACE from Pomona to Colton Crossing in San Bernardino County has been studied by the San Bernardino Associated Governments (SANBAG) as part of a larger grade crossing study in that county. The Governor's Traffic Congestion Relief Program specifies that railroad to railroad grade separation at Colton Crossing be constructed to eliminate conflicts between railroad passenger and freight traffic where the east-west UP Alhambra/Yuma Line crosses the north-south BNSF San Bernardino Subdivision (also used by UP).



The Orangethorpe Corridor component of the ACE comprises 15 grade crossings extending about seven miles across northern Orange County, along the Burlington Northern-Santa Fe Railroad. It is part of a much longer rail corridor (about 60 miles) from Downtown Los Angeles to Colton Crossing via Riverside. The Orangethorpe Corridor is partially funded in the Baseline. Further study of potential track lowering through Placentia is currently under way as part of the Orange County Gateway Project, now called the Orange-North America Trade Rail Access Corridor (ONTRAC). The Governor's Traffic Congestion Relief Program includes some of the funding for the Orangethorpe Corridor. Riverside County has recently completed a study of the ACE through Riverside and Colton Crossing.

Other ACE studies of the railroad main line corridors in San Bernardino and Riverside Counties have also evaluated grade crossings along the UP Yuma Main Line extending east from Colton to Indio (in the Coachella Valley) and the BNSF/UP Cajon Line north from Colton. The Gateway Cities Grade Crossing Program would improve railroad-highway crossings in the heavily industrialized area north of the Ports of Los Angeles and Long Beach. Finally, improvements will be made along the Orange-Olive corridors in Orange County, between Fullerton/Placentia and the San Diego County line.

Improvements to the main line railroad corridors will extend many of the benefits of the Alameda Corridor eastward, providing a conduit for Pacific Rim trade. These corridor improvement projects will reduce delay to cars and trucks as well as lower noise and improve air quality. They will also improve safety at all crossings that are upgraded—reducing the potential for accidents and possible disruptions of the flow of international and domestic rail freight to the rest of the nation.

ACTION—Conduct a multi-county study of the grade crossing improvement needs for the Alameda Corridor East and the Los Angeles-Orange County-Riverside main line rail.

Railroad Main Line Productivity

Complementing the project to improve grade crossings between Los Angeles and the Inland Empire on the Union Pacific and Burlington Northern-Santa Fe main lines, is a need to evaluate railroad capacity on these lines to enhance the ability to move both passengers and freight with a minimum of delay. A corridor management plan should be

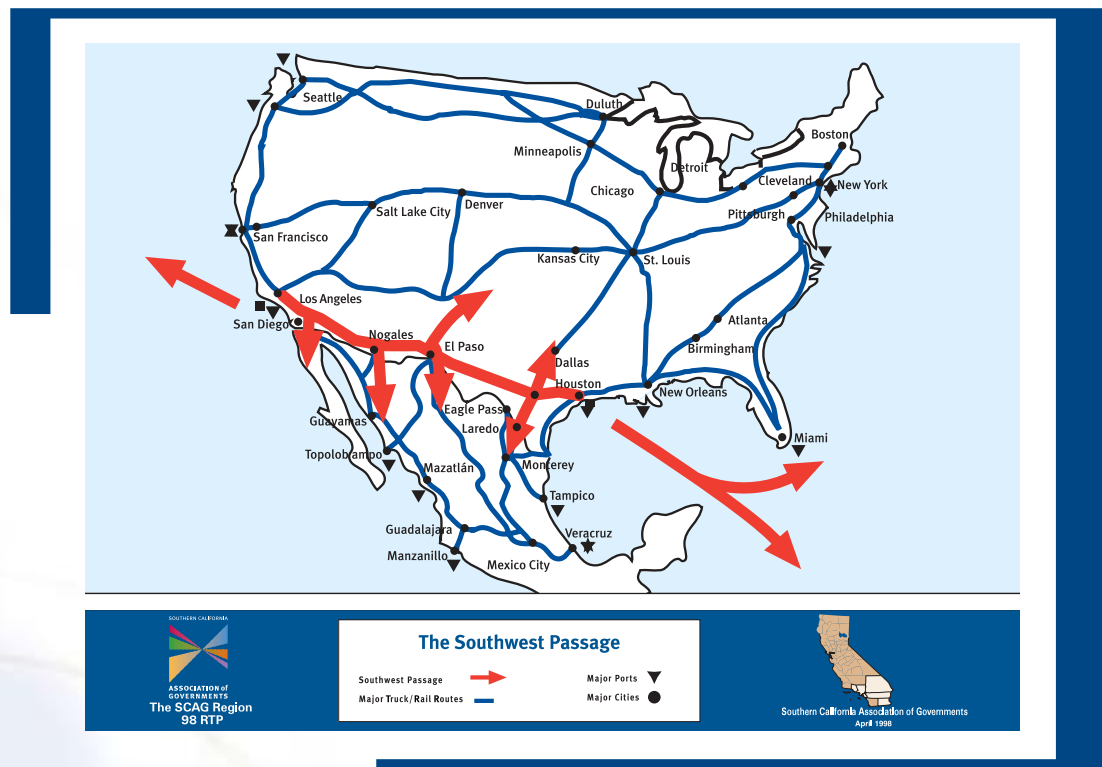
developed for these east-west railroad lines between the Los Angeles Downtown rail yards (at the north end of the Alameda Corridor) and Colton Crossing to maintain or improve current levels of reliability and train speeds. This would make it possible to maintain the competitiveness of the rail mode for long-haul, time-sensitive freight shipments, including marine port and domestic traffic, while simultaneously mitigating environmental impacts on communities traversed by the lines. Public-private partnerships should be considered when making facility improvements.

ACTION—Conduct a comprehensive study of railroad east-west main line infrastructure to provide enhanced capacity and reliability of rail freight operations linking the ports and Downtown rail yards with the Inland Empire and the rest of the country, while maintaining essential passenger services on the same lines and mitigating environmental impacts.

Southwest Passage

Connecting the Region's ports with the rest of the country is essential for our continued economic competitiveness. With international trade being one of the fastest growing segments of the economy, the SCAG Region is well positioned to take advantage of the trade possibilities, beginning with Pacific Rim and NAFTA countries. Development of the Southwest Passage, which extends from all three ports eastward generally along the I-10 and I-8 corridors toward Texas, is designed to promote freight movement and economic growth. Cooperation among our southwestern neighbor states, MPOs, COGs and the private sector is critical to the success of this project.

Figure 5.8



ACTION—Support development of the Southwest Passage with a series of briefings to federal and state legislatures; creation of an association of southwest states, MPOs, COGs and private stakeholders; and inclusion and funding of the Southwest Passage in the TEA-21 as a study.

Hueneme, Long Beach and Los Angeles Seaports

International and domestic cargo volumes are forecasted to triple by 2025 for these three regional seaports, whose commerce is dependent on existing and planned landside transportation links. The ports will spend an estimated \$6 billion on their own facilities and on rail and highway access over the next 25 years. The San Pedro Bay Ports (Los Angeles and Long Beach) have an ambitious program for transportation infrastructure improvements, including arterial widening to serve truck traffic, freeway ramp improvements, railroad grade separations, rail yard expansion and ITS improvements in addition to landfill projects and new and reconfigured terminals.

Further, the Port of Hueneme is implementing \$20 million in improvements on the recently conveyed 33-acre US Naval Civil Engineering Laboratory and on public streets with access to the port. Collectively, these investments by the three regional ports are intended to enable a tripling of cargo volumes by 2025 as well as position the SCAG Region as the primary load center for ocean cargo in the Western Hemisphere.

ACTION—Support improvements at the seaports and local streets, arterials and rail connections as shown in the respective port plans. (These expenditures are funded from maritime sources, which are not included in the Regional Checkbook.)

ACTION—Support roadway and rail access investments that improve access to the regional seaports of Port Hueneme, Long Beach and Los Angeles.

ACTION—Support the subregions in obtaining funding for port area landside access studies.

Inland Ports and Inland Intermodal Terminals

Growing international trade volumes through the San Pedro Bay ports will increase the demand for land located immediately behind the docks for the purpose of sorting and storing marine containers. Some of these activities can be carried out on lower-valued/easily available land in the Inland Empire. An alternative to the high-demand land that is needed could be the creation of an inland port facility or facilities with shuttle trains that convey marine containers to sorting centers for reassembly into line-haul trans for transport to the Middle West or Gulf Coast. Further, shuttle trains might carry containers bound for points in the Inland Empire as a substitute for truck drayage, alleviating some truck traffic on east-west freeways or even avoiding the need for an SR-60 truck lane project.

There is also probably a need for one or more new joint-use inland intermodal terminals to directly load domestic container and trailer loads onto flatcars in the Inland Empire. This would reduce unnecessary truck movements between inland points and Downtown rail yards, and reduce empty train miles for some transcontinental freight movements that could originate in the Inland Empire instead of Downtown Los Angeles. Such terminals could be combined with inland port operations, providing a magnet for the growth of light industry, warehousing, forwarding and load consolidation activities as well as customs inspection. This can possibly be combined with free trade or enterprise zones. An example of an inland domestic rail intermodal terminal is the proposed Morongo Intermodal Transload and Industrial Center (MITIC) project in the Cabazon area of Riverside County.

A related issue is the need to reduce the movement of empty containers between the ports and nearby or regional shippers and warehouses. This movement results in additional freeway congestion and delays at port terminals. Computerized container matching/dispatching systems to permit unloaded import containers to be cleaned and dispatched directly to load points for the export move, could help reduce empty container moves and reduction of related truck emissions.

Studies should be conducted on all of these issues relating to the logistics chains involved in long - and short-haul marine container movements to determine their benefits, marketability, operational feasibility and funding and financial requirements. It is anticipated that, to a large extent, the private sector would develop and operate such facilities as inland ports and intermodal terminals.

ACTION—Determine the feasibility of inland port and new inland intermodal terminal operations, including several alternative container handling and rail haul options to provide more efficient and reliable truck and intermodal freight movements, less congestion, lower emissions and enhanced Inland Empire industrial development potential.

ACTION—Conduct a feasibility study of the potential to reduce the movement of empty marine containers through the use of an Internet-based container matching service in order to reduce freeway congestion and emissions.

Air Cargo

For a discussion of aviation scenarios considered and the final aviation plan included in the 2001 RTP, please see the Aviation section of this RTP. SCAG performed a demand analysis of air cargo based on the same methodology used for calculating regional air passenger demand, but with cargo-specific factors and variables. The results are listed in the table below.

Table 5.14

| AIR CARGO GROWTH DISTRIBUTION BETWEEN AIRPORTS IN MILLIONS OF AIR CARGO TONS (MAT) IN 2025 | | | | | | | | | | | | | | | | |
|---|-----|------|------|------|------|------|------|------|------|------|-----|------|------|--------|-----|--------|
| Scenario | | BUR | ELT | SNA | LAX | LGB | MAR | ONT | PSP | PMD | MUG | SBD | SCI | Incent | HSR | Totals |
| 1997 | MAT | 0.04 | | 0.02 | 2.05 | 0.03 | n/a | 0.47 | 0 | 0 | n/a | n/a | n/a | n/a | n/a | 2.6 |
| 2025 Plan | MAT | 0.07 | 1.69 | 0.03 | 2.98 | 0.06 | 1.08 | 2.25 | 0.02 | 0.12 | n/a | 0.88 | 0.32 | Yes | Yes | 9.5 |

Bur = Burbank
MAR = March Global Port
SBD = San Bernardino Int'l

ELT = El Toro
ONT = Ontario
SCI = Southern California Logistics

SNA = John Wayne
PSP = Palm Springs
Incent = Market Incentives

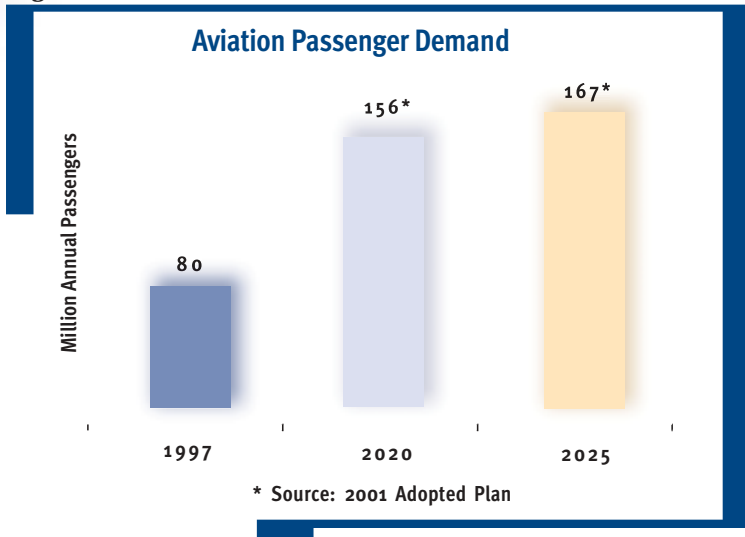
LAX = Los Angeles Int'l
PLM = Palmdale
HSR = High Speed Rail

LGB = Long Beach
MUG = Point Mugu

AVIATION AND AVIATION GROUND ACCESS

With the Region becoming an even greater international gateway, there will be an increase in the number of air passengers, as well as goods, coming into (and going out of) Southern California. The year 2025 may see the arrival or

Figure 5.9



departure of more than 167 million passengers annually, up from the 80 million recorded in 1997 (see Figure 5.9). At the same time, air cargo demand is expected to reach 9.5 million tons. Not only will these increases require greater capacity in the airport system, but they will also impact roads near the airports. Domestic and international air travel and air cargo will play increasingly important roles in the Region's economic growth. Additionally, general aviation airports will play an increasing role in relieving congestion at capacity constrained airports.

The 2001 RTP, when forecast to 2025, indicates a regional demand of 167 million annual passen-

gers. The capacity of the existing urbanized commercial airport system (excluding Palm Springs and former military air bases) is estimated at 120 million annual passengers. Without airport development, the system will experience a passenger capacity shortfall of 28 percent by 2025.

Over the same period of time, air cargo is expected to grow from 2.6 million annual tons in 1997 to 9.5 million annual tons in 2025. This cargo growth rate is almost double the passenger growth rate and reflects actual increases since 1992 and expected increases in Pacific Rim air cargo activity.

Aviation System Investments

The growth in air passenger and air cargo demand requires the judicious expansion of existing commercial service airports and the development of former military air bases if the economic benefits of air commerce are to be fully captured by the Region. Several military air bases were closed in the 1990s, allowing the Region the opportunity to develop the additional airport capacity. These former air bases include El Toro Marine Corps Air Station, Norton Air Force Base (San Bernardino International Airport) and George Air Force Base (Southern California Logistics Airport). Joint-use facilities include March Air Reserves Base (now a joint-use base called March Global Port), Palmdale Regional Airport and (potentially) Point Mugu.

The potential adverse impacts of airport expansion require the consideration of regional strategies and policies to decentralize aviation demand and provide an equitable distribution of regional aviation facilities. In addition, the expansion of existing airports and development of former military air bases should take into account the impacts of population and job growth in the Region so that regional trip-making is reduced and community impacts are minimized.

Since the 1998 RTP did not fully resolve some regional aviation issues, an Aviation Task Force consisting of elected officials and aviation industry professionals was formed to develop and evaluate additional scenarios and provide further policy direction to the Regional Council.

Four main policy questions were analyzed:

- ▶ Can we decentralize aviation demand by assuming physical constraints at LAX and other urbanized airports?
- ▶ Can we decentralize aviation demand by developing El Toro and/or other former military bases as commercial airports?
- ▶ Can we decentralize aviation demand through high-speed rail linkages between airports?
- ▶ Can we decentralize aviation demand through market incentives at Palmdale and the Inland Empire airports?

Aviation Strategy

The 2001 RTP is pursuing a strategy to shift demand away from heavily used LAX to other airports throughout the Region. The assumptions for the preferred strategy are:

- LAX is constrained under this scenario to its existing physical capacity, estimated at 78 million annual passengers (MAP).
- Burbank, John Wayne and Long Beach are constrained to their legal or estimated physical capacities.
- Ontario has a third runway to accommodate demand.
- Palmdale, March Global Port, Palm Springs, San Bernardino International and Southern California Logistics airports are unconstrained.
- High-speed rail linkages between airports along the Maglev corridor are assumed, as well as market incentives at Palmdale and emerging airports.

Under this strategy, aviation demand is expected to be 167 million passengers and 9.5 million tons of air cargo in 2025.

Implementation of the Strategy

To implement an adopted regional aviation element, structured as a component of the RTP, new institutional arrangements are necessary. SCAG operates as the designated Metropolitan Planning Organization and is mandated by the federal government to research and draw plans for transportation (including airports), growth management and air quality, but has no implementation authority over airport development beyond prioritizing surface transportation projects funded by the Federal

Table 5.15

| AVIATION SYSTEM (MILLION ANNUAL PASSENGERS) | | |
|--|-----------|------------|
| | 1997 | 2025 |
| Burbank | 5 | 9* |
| El Toro | n/a | 30 |
| John Wayne | 8 | 8* |
| Los Angeles Int'l | 59 | 78* |
| Long Beach | 1 | 3* |
| March Global Port | n/a | 2 |
| Ontario | 6 | 30 |
| Palm Springs | 1 | 3 |
| Palmdale | <1 | 2 |
| Point Mugu | n/a | n/a |
| San Bernardino Int'l | n/a | 2 |
| Southern California Logistics | n/a | 1 |
| Market Incentives | n/a | yes |
| High Speed Rail | n/a | yes |
| Total Million Annual Passengers | 80 | 167 |

*indicated airport legally or physically constrained
n/a = not applicable

Highway Administration. SCAG must work cooperatively with agencies such as the California Department of Transportation (Caltrans) as well as federal and local agencies to facilitate the plans that it creates.

The authority for the implementation of SCAG's regional aviation plan currently rests with individual airports. The Southern California Regional Airport Authority (SCRAA) offers a new opportunity to implement regional aviation plans. The SCRAA consists of members from the City of Los Angeles, Riverside, San Bernardino and Orange. SCAG is a non-voting member of the Authority's Board of Directors.

Guiding Principles:

- ▶ Provide for regional capture of the economic development opportunities and job growth created by the prospect of significant growth in air traffic in the Region between now and 2025.
- ▶ Reflect environmental, environmental justice and local quality of life constraints at existing airports that operate in built-out urban environments.
- ▶ Distribute maximum opportunity to Southern California airports where population and job growth over the next two decades are expected to be strong and where local communities desire the air traffic for economic development reasons.
- ▶ Reflect that each county should have both the obligation and the opportunity to meet its own air traffic needs where feasible.

ACTION—Support the expansion of capacity at major existing and potential regional airports to handle anticipated increases in both passenger and cargo volume.

ACTION—Mitigate the effects of expanding existing airports and consider the reuse of military air bases so that community impacts are minimized.

ACTION—Maximize air passenger and air cargo utilization of outlying airports in less populated areas.

Ground Access

The recommended Aviation strategy will have localized ground access impacts at a number of airports. Particularly, the proposed scenarios would increase airport activities (people as well as cargo movement) dramatically at Ontario and El Toro. Analysis shows that airport traffic impacts are concentrated near airports but that background congestion affects both airports and local communities. A number of freeway and arterial improvements and transit strategies are proposed in the Plan to address the ground access issues as part of the overall transportation investment in the Region. Specific ground access improvements proposed in the Plan are identified in the RTP Technical Appendix.

ACTION—Construct improvements on arterials, highways and rail lines to accommodate added freight movements to and from airports.

ACTION—Support subregions in obtaining funding for ground access studies.

TRANSPORTATION DEMAND MANAGEMENT (TDM)

The potential state of TDM in 2025 depends largely on the level of funding as well as social and institutional commitments. If we were to do nothing beyond the Baseline, it is unlikely that we could even sustain the current level of ridesharing, telecommuting and work-at-home, let alone expanding them over the 2001 RTP period. While the total number of HOV lane users could increase due to absolute increase in population/employment and a more complete HOV lane network, it is unlikely that the number of vanpools will increase significantly beyond its current level.

Investments in TDM

Regionally, we must sustain the existing carpool market share. Just a one percent drop in the carpooling rate translates into more than 40,000 additional vehicles on our freeways and surface streets daily, which in turn results in an annual increase of 302 million vehicle miles of travel.

Key recommendations to maintain and increase carpool share are:

- ▶ Program funds in the RTIP to maintain the existing carpool market and increase the number of carpoolers by 8,000 per year.
- ▶ Pursue dedicated funding for education and outreach to the general public to increase awareness of and participation in the regional rideshare program.

ACTION—Support the maintenance of the existing carpool market share and an increase in carpooling.

ACTION—Continue to support funding for education and outreach to the general public in order to increase awareness and participation in carpooling and vanpooling.

Table 5.16

| TDM & NON-MOTORIZED INVESTMENTS (IN MILLIONS) | | | | |
|--|---------------|--------------|--------------------------|---|
| County | Non-Motorized | Rideshare | ITS/Traveler Information | TDM (Park-and-Ride Lots, Telecommute, etc.) |
| Imperial | \$30 | \$0 | \$0 | * |
| Los Angeles | \$385 | \$180 | \$555 | \$155 |
| Orange | \$139 | \$50 | ** | \$31 |
| Riverside | \$50 | \$22 | \$25 | \$25 |
| San Bernardino | \$50 | \$45 | \$29 | \$25 |
| Ventura | \$65 | \$0 | \$80 | * |
| Regional Total | \$719 | \$297 | \$689 | \$236 |

* Imperial and Ventura County costs for TDM are included in the Non-Motorized amount.

** Orange County costs for ITS are included in the Rideshare amount.

Vanpools

Vanpooling is considered one of the most cost-effective TDM strategies for long-distance commuters. The effectiveness of vanpooling is based on its ability to reduce vehicle trips and vehicle miles of travel. Within the SCAG Region, there are over 2,000 vanpools in operation, carrying an average of 10 riders and travelling approximately 35 miles per one-way trip. Vanpool programs are primarily operated by the private sector, thereby utilizing minimum public subsidy.

Vanpooling has traditionally been considered to be most suitable for long-distance commuting. However, in some metropolitan areas such as Seattle, they are increasingly being used for short-to-medium-range commute trips. Additionally, in some markets, vanpools are being utilized to replace costly, inefficient express bus service.

Vanpools and transit markets may overlap. Both might serve trips from suburban communities into central areas or other suburban activity centers. However, vanpools or jitneys can serve low-density residential communities where transit operators cannot or do not offer service. Additionally, vanpools can service those traveling on reverse commutes, where transit service may still be lacking.

There are several situations that favor vanpool applications:

- ▶ Tight parking around the destination site or where drivers must pay for parking or both.
- ▶ The presence of HOV facilities on freeways.
- ▶ Preferential parking, variable work hours and guaranteed ride-home programs at the work sites.
- ▶ Transit does not serve the area or is not planned for the future, or estimated travel demand does not warrant service with full-size buses.

ACTION—Formalize and expand the existing partnership among public and private sector stakeholders to improve delivery of vanpool services regionwide.

ACTION—Increase the number of commuter vanpools from 2,000 to 5,000 through more effective marketing and the provision of non-monetary public sector incentives.

ACTION—Establish a dedicated funding source for planning and the implementation of vanpool programs and services.

ACTION—Improve the provision of vanpool services in the Region through the public sector's increase of dedicated staffing and resources.

ACTION—Facilitate a regionally coordinated marketing strategy among the public and private sectors that would enhance vanpool programs, increase ridership and unify the current limited and fragmented outreach efforts.

Telecommuting

Telecommuting is the most popular program that an employer can offer employees to reduce vehicle trips. In fact, if given the opportunity to telecommute, more than eight in ten full-time workers actually do, at an average of 3.4 days per month. However, telecommuting is one of the least frequently offered programs by employers. Outreach strategies should be aimed at employers, rather than employees, to promote the benefits of telecommuting and to provide recommendations on how to implement a telecommuting program at the work site.

- ▶ SCAG intends to continue working with the interagency working groups to finalize the design of an emission trading pilot program based on telecommuting.
- ▶ Pursue an aggressive education and public outreach program, particularly at work sites with less than 250 employees. This may include a program to generate tax deductions for emissions reduced. If viable, this could be based on allowing charitable deductions to employers for the market value of the emissions reduced. The credits generated by employers would be donated back to the Region for SIP and conformity requirements.
- ▶ Consider an emissions trading program that would allow employers not regulated by Rule 2202, as well as those that are, to trade telecommute credits for reaching average vehicle ridership (AVR) goals. Under such a scheme, trading would occur between these two parties within the confines of Rule 2202.

Park-and-Ride Facilities

Park-and-ride facilities are a significant component of the transportation and transit system in the SCAG Region. Their objective is to provide a safe and convenient location for travelers to change from single occupant vehicles to high occupancy modes such as bus, rail, carpools and vanpools.

Park-and-ride facilities could play an important role in supporting commuter rail, heavy and light rail transit, busway, HOV, express bus service and local bus systems. However, the lack of dedicated resources for marketing, maintenance and operations has adversely affected the available capacity and utilization of park-and-ride facilities within the SCAG Region.

ACTION—Fully integrate park-and-ride facilities into SCAG’s existing and future transportation planning and programming processes.

ACTION—Establish a regional, interagency committee to develop and implement regionwide policies and programs pertaining to the operation, maintenance and expansion of park-and-ride facilities.

ACTION—Develop strategies to address security issues and to combat vandalism.

ACTION—Develop and implement a regionally coordinated public outreach strategy to better inform the public on the location of all park-and-ride facilities within the SCAG Region.

ACTION—Enhance the existing centralized database and ensure the incorporation of information on all park-and-ride facilities into this central information system.

ACTION—Develop and implement a coordinated schedule by which each agency will monitor its park-and-ride facilities on a monthly basis to determine the utilization rates over time; incorporate this information, along with any facility changes/additions (including transit service changes), into the central information system.

ACTION—Secure dedicated funding sources for the development and implementation of these recommended actions.

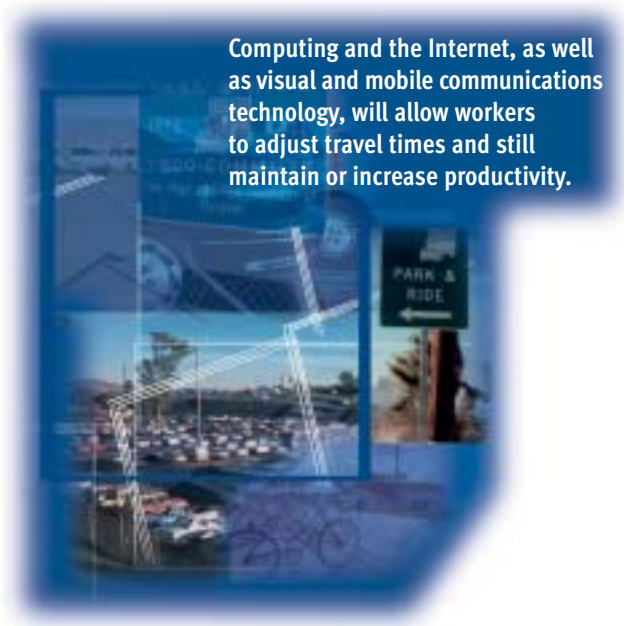
Electronic Workplaces and Electronic Commerce

The revolution in communication and computing technology will create new opportunities for work, social and economic activities to be carried out without the need for individuals to travel as they have historically done. The electronic workplace may be at home, on a train, at a meeting, in the field or at a satellite work facility. Computing and the Internet, as well as visual and mobile communications technology, will allow workers to adjust travel times and still

maintain or increase productivity. Meetings, for instance, may be held through teleconferencing, thereby reducing the need for many workers to travel or reducing travel during peak periods. Reports and graphics may be prepared and sent for review electronically, thereby reducing the need to transport those materials.

Information technology also allows people to order goods and services on-line instead of making trips. A proliferation of e-commerce will increase consumer choice, without an increase in the propensity to travel to acquire those goods and services. Everything from entertainment to office supplies and groceries may be ordered reliably through electronic commerce and delivered to the desired site.

The quantification of the mobility and air quality benefits of such strategies is still preliminary. Early indicators of productivity, such as the number of orders to various services and surveys of employees who use flexible schedules made possible by new technology, indicate that changes in travel are likely. The RTP must begin to analyze and quantify these still emergent benefits as they develop. Trend analysis of the electronic information phenomenon should be possible using many commercial indices of electronic workplace and commerce activities. SCAG is currently developing a number of efforts aimed at tracking e-commerce and assessing the issues and likely benefits for mobility and air quality based upon changes in travel behavior.



NON-MOTORIZED TRANSPORTATION

Non-motorized transportation, by its very nature, would be more effective at a local level in communities that are densely populated and have a good mix of land uses, including commercial, residential and institutional. It can mainly serve as a recreational mode at a regional level. Unless substantial investments in non-motorized transportation are coordinated with other modes and facilities, it would be very difficult to gain a significant increase in mode share of the work trips for non-motorized transportation in 2025.

Investments in Non-Motorized Transportation

Bicycle and pedestrian improvements help to enable the vision of Livable Communities and provide non-motorized linkages to activity centers. Approximately \$720 million for non-motorized projects are identified for the 2001 RTP (compared to \$400 million over the Plan period of the 1998 RTP). The Baseline contains about \$180 million in funding related to non-motorized projects. This represents approximately 0.12 percent of the total Baseline funding. Therefore, the proposed funding represents a significant increase in the funding level for non-motorized transportation. The Region's decision-makers should continue to promote the integration of non-motorized modes into the

transportation planning process and take steps to move beyond conceptual planning and development to the implementation of plans and strategies. The following actions are recommended to facilitate the achievement of these goals:

ACTION—Determine the potential and desired mode split of non-motorized modes in congestion reduction and adopt vision, goals and objectives accordingly.

ACTION—Determine the ability of the existing non-motorized system to achieve the desired vision, goals, objectives and update and implement the existing SCAG regional plan as appropriate.

ACTION—Identify and develop strategies to address institutional, transportation, funding, infrastructure and other barriers to the effective use of non-motorized transportation for commute purposes.


ACTION—Identify strategies to link non-motorized transportation funding programs to standards for Livable Communities and transit programs by providing communities flexibility in how they address Livable Communities goals and programs.

ACTION—Fund the development and implementation of pedestrian and bicycle safety and education programs aimed at persons of all ages, potential bike commuters and motorists.

ACTION—Sponsor legislation and/or ordinances to increase the enforcement of bicycling and driving laws to provide a safer climate for pedestrians and cyclists.

ACTION—Develop and implement bicycle incentive programs that recognize and reward employees for bicycle use similar to those that reward transit use.

ACTION—Introduce legislation that provides for business tax credits and other incentives to encourage the use of bicycles.



Approximately \$720 million for non-motorized projects are identified for the 2001 RTP.

INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

Intelligent Transportation Systems (ITS) represent a means of applying new technological breakthroughs in detection, communications, computing and control technologies to improve the safety and performance of the surface transportation system. This can be done by using the technologies to manage the transportation system to respond to changing operating conditions, congestion or accidents. ITS technology can be applied to arterials, freeways, transit, trucks and private vehicles. ITS includes Advanced Traffic Management Systems (ATMS), Advanced Vehicle Control Systems (AVCS) and Commercial Vehicle Operations (CVO).

Today, applications of ITS technologies allow the monitoring of traffic conditions and the dynamic adjustment of traffic signals to reduce unnecessary delay; the automated collection of tolls; and advanced detection and television cameras to detect, assess and respond to traffic accidents and incidents. In the future, ITS technologies will automate transit fare collection and parking payments, use vehicle location systems to track trains and buses to give users “real time” arrival and departure information, as well as use onboard systems to detect and avoid collisions.

Within the SCAG Region and San Diego County is the Southern California ITS Priority Corridor, which is one of four corridors of national significance identified for early ITS deployment by Congress under the Intermodal Surface Transportation Efficiency Act (ISTEA). The ITS plan for this corridor includes major local elements developed by three public-private committees, including LA-Ventura, Orange County and the Inland Empire. The Plan coordinates architecture, standards and institutional issues and also provides the framework for deploying an integrated ITS.

The Plan's ITS strategy includes a number of components and user services:

- ▶ Completion of advanced traffic management of the Region's freeways and certain arterial corridors, through traffic operations centers, signal synchronization, ramp meters and visual detection.
- ▶ Advanced Traveler Information Systems will provide real-time information to system users on traffic conditions, incidents, accidents, events, weather and alternative routes and modes.
- ▶ Advanced Public Transportation Systems will provide some of the technology to implement improved dispatching of transit vehicles and will enable vastly improved demand-responsive transit services.

ACTION—Intelligent Transportation Systems (ITS), where applicable, shall be included in, and implemented through, mainstream planning and programming processes. And, where feasible and applicable, ITS should be incorporated as an operational component, in the design and construction of new federally funded facilities, or in the procurement processes for new equipment, consistent with the requirements of the National Architecture Rule.

LAND USE—TRANSPORTATION

Livable Communities

Under the strategy of Livable Communities, SCAG and other policy leaders are placing a growing emphasis on new land-use and transportation policies that will accommodate future growth while addressing automobile traffic and air quality concerns. The focus of the Livable Communities program is to enhance community livability by promoting real-world examples of vibrant, attractive places in Southern California. A key strategy is establishing a shared community vision that promotes community development and main street revitalization scaled to people, not automobiles.

Livable Communities strategies encourage efficient growth patterns that promote alternatives to the automobile by creating a mix of homes, shops, work places, parks, schools and civic institutions that are linked to pedestrian- and bicycle-friendly public transportation centers. Strategies such as transit-oriented and mixed-use development employ a combination of design features, including improved street connectivity, public amenities and a concentration of residences and jobs in proximity to transit routes, resulting in reduced area-wide traffic congestion and improved air quality.

The 2001 RTP includes a number of policies that support the local governments' development of pedestrian- and transit-friendly Livable Communities. These policies include transit-oriented development, mixed-use centers, non-motorized transportation facilities, transit improvements and private investment through location efficient mortgages (LEMs).

Because many impacts of the Livable Communities strategies are realized at a neighborhood or community scale, it is difficult to quantify benefits at the regional scale. SCAG's Livable Communities Subcommittee was created to address this issue. The Subcommittee has identified the location efficiency index and transit and non-motorized mode split as two Performance Indicators of "livability." Their recommendations led to current efforts aimed at realizing quantifiable impacts of program strategies on vehicle trips, vehicle miles traveled and air quality.

SCAG is committed, through its RTP, to accommodate projected population and employment growth, while maintaining a high quality of life for all residents of the SCAG Region. The Livable Communities program incorporates a variety of dynamic land-use and transportation policies to contribute toward achieving this end.

ACTION—Refine SCAG regional modeling to address land-use/ transportation and air quality interactions.

ACTION—Refine and apply new performance measures for Livable Communities.

ACTION—Establish incentives to encourage the implementation of Livable Communities strategies by local governments and subregions, private developers and financial institutions.

ACTION—Implement a legislative strategy to support Livable Communities goals. A first step would be to evaluate the package of bills proposed by the new Smart Growth caucus in the California legislature.

ACTION—Support the Regional Transit Task Force recommendations for transit policies that improve the efficiency, effectiveness, coordination and stability of transit operation as well as increase transit mode share within the SCAG Region.



Location Efficient Mortgages

The location efficient mortgage (LEM) strategy combines market incentives with land-use decisions to reduce vehicle miles traveled and vehicle trips and improve air quality. LEMs can enable people living in or near a neighborhood served by public transit to afford a larger home mortgage. This strategy provides a tangible, monetary incentive to increase population density in areas currently served by public transit and locate future residential and mixed-use development near existing or planned transit facilities.

Efforts to develop and promote LEMs will continue to be supported by the 2001 RTP. With LEMs in place, lenders provide credit for transit access when determining mortgage eligibility. LEMs provide mortgage accessibility to a higher percentage of the urbanized population and support home ownership in centers with multi-modal transit access.

ACTION—Support continuing efforts by the Center for Neighborhood Technology and Surface Transportation Policy Project to develop and promote LEMs and obtain participation agreements by lending institutions.

ACTION—Develop methodologies to quantify mobility and air quality impacts of LEM.

ACTION—Work with the housing industry, financial institutions, affordable housing interests and agencies to promote the LEM strategy.

Integrated Land Use, Transportation and General Planning

As the Southern California Region enters the 21st Century, the promotion of sustainable growth and development patterns will be critical to continued regional prosperity and improved quality of life. The challenges of future population and employment growth and their effect on traffic congestion, transportation investment choices, air quality and housing needs are significant long-range planning issues. As such, the Region has begun to re-evaluate the transportation-land use planning process, with an emphasis on better coordination between the two.

In response, SCAG has created the Growth Visioning Subcommittee to inform, engage and facilitate consensus on a vision and strategy for addressing the challenging consequences of anticipated growth in the Region. Expanding on the Livable Communities program, the Growth Visioning Subcommittee has been established as the forum to review alternative strategies to accommodate this growth. Specifically, this subcommittee is charged with developing a process that assists local, subregional and regional officials in developing strategies to accommodate growth that result in a preferred regional growth scenario.

These efforts are intended to guide future growth forecasts in a manner that recognizes the impacts of the location of projected employment and population growth on land-use patterns, transportation facilities and the environment and open space. Examples of these strategies might include promoting Smart Growth in activity centers and along growth corridors, focusing growth in pedestrian-friendly, transit accessible communities and achieving a better regional jobs-housing balance. These strategies, used in concert, can provide Southern Californians with additional housing, employment and transportation choices, while protecting the natural environment for future generations.

Smart Growth

Smart Growth is well-planned, efficient development that channels projected population and employment growth into existing areas and designated growth corridors in a manner that:

- ▶ saves our most valuable remaining natural resources,
- ▶ supports existing communities and neighborhoods,
- ▶ reduces commute times, commute distances and mobile source emissions,
- ▶ provides mass transit options and
- ▶ saves taxpayers millions of dollars in the cost of building unnecessary infrastructure.

Smart Growth is not meant to limit growth, rather to encourage growth in the areas best suited to accommodate it.

Livable Communities / Transit-Oriented Development

Livable Communities principles are neighborhood-level strategies that encourage efficient growth patterns and promote alternatives to the automobile by:

- ▶ creating a mix of homes, shops, work places, parks, schools and civic institutions,
- ▶ locating a significant share of new housing and jobs within walking distance (1/4 mile) of transit stations or major bus corridors,
- ▶ linking communities and neighborhoods with viable pedestrian and bicycle facilities and
- ▶ promoting in-fill development to revitalize under-utilized and vacant sites.

Jobs/Housing Balance

The lack of affordable housing near employment centers is greatly exacerbating the demand on transportation systems and adding to air pollution from vehicles. Thus, jobs/housing balance strategies aim to reduce commute distances by:

- ▶ developing needed affordable housing in high growth urban and suburban job centers and
- ▶ attracting viable job centers to housing-rich communities.

ACTION—Continue working with the Growth Visioning Subcommittee to develop strategies to accommodate growth that result in a preferred growth scenario.

ACTION—Coordinate with subregions and local governments to ensure that local plans are consistent with the regional growth forecast.

ACTION—Study the feasibility of establishing locally designated Smart Growth Planning Areas that receive funding incentives for projects reflecting Smart Growth principles.

ACTION—Assist communities and subregions in accessing new jobs/housing incentive funds from the State Department of Housing and Community Development.

ACTION—Establish incentives to encourage the implementation of Growth Strategies by local governments and subregions, private developers and financial institutions.

ACTION—Establish Performance Indicators to measure progress toward achieving Growth Strategies goals.

ACTION—Implement a legislative strategy to support Growth Strategies goals.

ACTION—Support the Livable Communities Task Force recommendations for community-based policies that encourage efficient growth patterns and promote alternatives to the automobile.



Accessing the Activity Centers

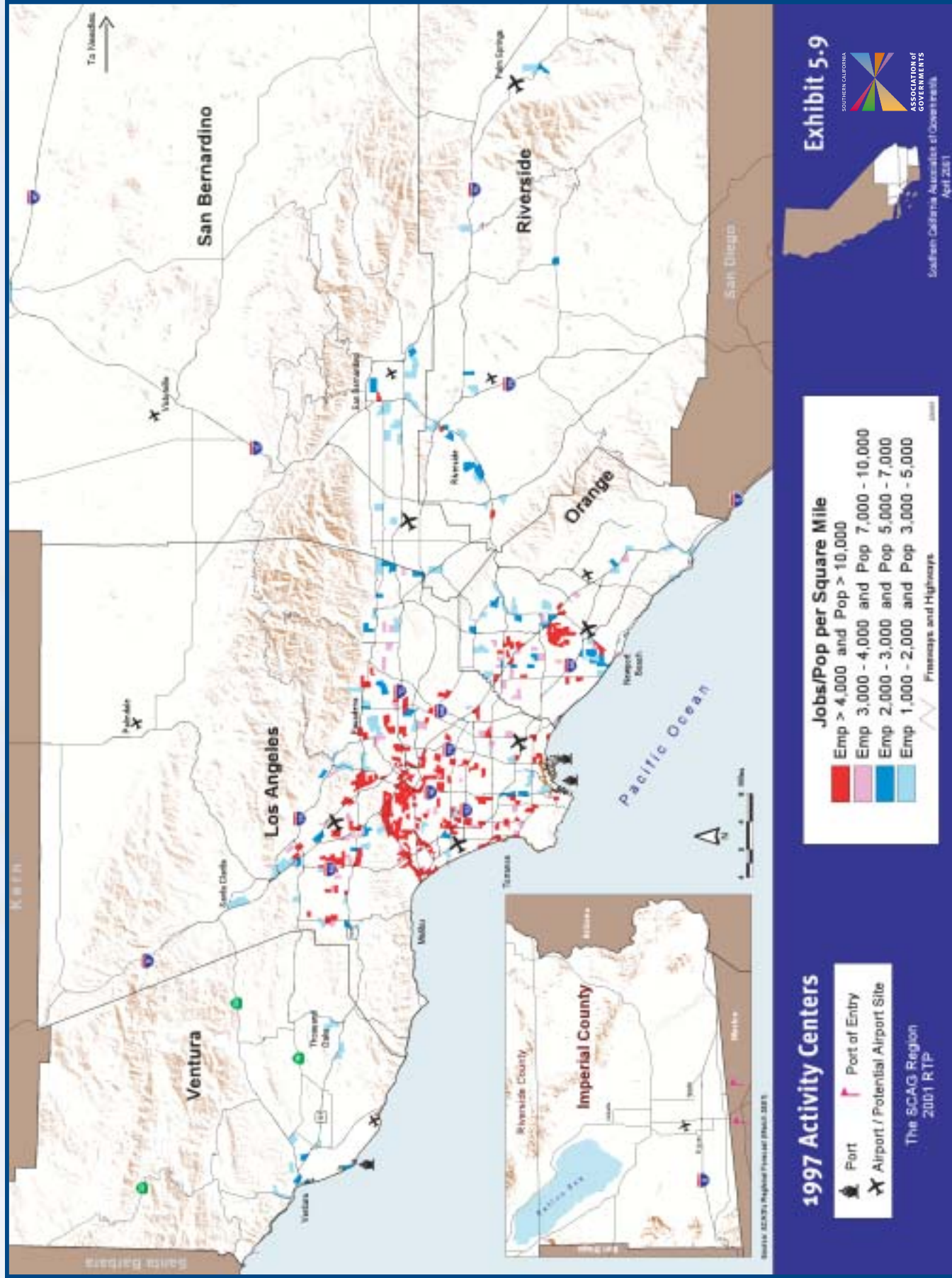
It is common knowledge that Southern California is a huge region with diverse land-use density and intensity. Focal points of the Region are many and dispersed. This makes transportation planning all the more challenging in this Region. Given the fiscal, physical and environmental constraints to building more roads and expanding our transportation network to accommodate future growth, it is imperative that we develop programs and policies that will serve our dispersed land-use pattern most effectively.

Exhibits 5.9 and 5.10 depict intensity of land use in terms of employment and population for 1997 and 2025, respectively, thereby identifying the activity centers within the Region. The challenge lies in developing the most effective ways to utilize our existing transportation infrastructure to link the activity centers so as to ensure that the transportation system complements our land-use pattern. This can be accomplished in two ways. First, in the short term, the Region can begin to develop initiatives that will allow trip-making in different ways—for example, by utilizing scheduled service vanpools that are specifically designed to provide access to the activity centers, and more flexible jitney services that use up-to-date information technology. In the long run, we must seek to relate the growth patterns, job development and housing creation to transportation innovations that reinforce and provide a stronger linkage between activity centers.

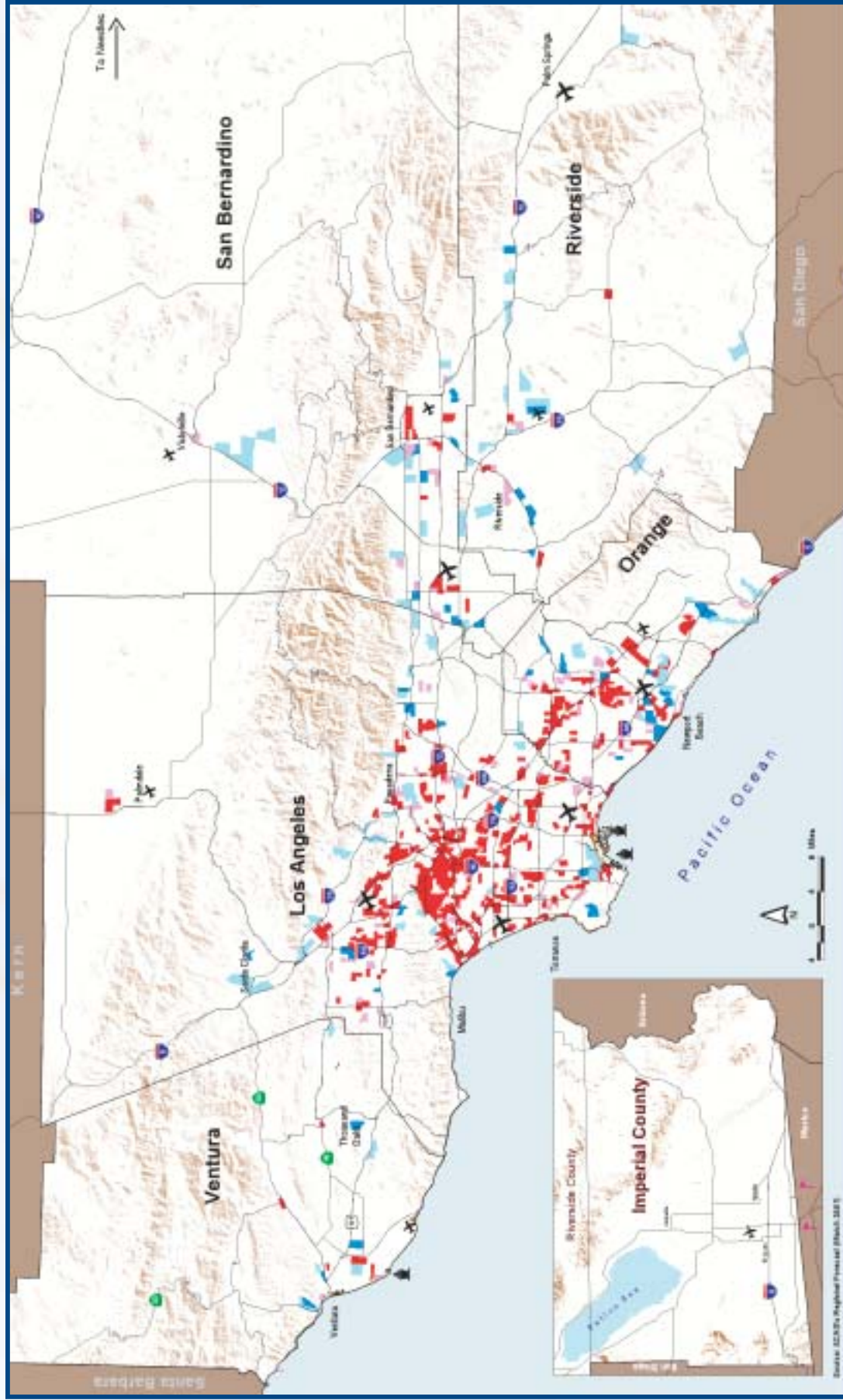
ACTION—Support policies that will complement our land-use/transportation patterns to provide stronger linkage between activity centers.

ACTION—Support scheduled service vanpools and jitney services that link activity centers.

1997 Activity Centers



2025 Activity Centers



2025 Activity Centers

- Port
- Port of Entry
- Airport / Potential Airport Site

The SCAG Region
2001 RTP

Jobs/Pop per Square Mile

- Emp > 4,000 and Pop > 10,000
- Emp 3,000 - 4,000 and Pop 7,000 - 10,000
- Emp 2,000 - 3,000 and Pop 5,000 - 7,000
- Emp 1,000 - 2,000 and Pop 3,000 - 5,000

Freeways and Highways

Exhibit 5.10



Southern California Association of Governments
April 2001

